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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,789	02/08/2002	R. Scott Forrest	38190.244112	2807
826	7590	03/07/2005	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			WYSZOMIERSKI, GEORGE P	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,789

Applicant(s)

FORREST ET AL.

Examiner

George P Wyszomierski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20041207.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 32-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-44 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 7-9, 11, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 2, 4-6, 10, 12-14 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20020208 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The petition to accept color photographs as drawings filed November 24, 2004 has been approved because the conditions for accepting color drawings under 37 CFR 1.84(a)(2) have been satisfied.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 7, 8, 9, 11, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bretz et al. (U.S. Patent 4,693,747).

Bretz discloses an aluminum alloy material having a plurality of finer grained regions and coarser grained regions, and in Figure 1 of Bretz, both types of regions are present on an exterior surface of the material, with a finer grained region at least partially encompassing a coarser grained region. Also in Bretz figure 1, these regions appear to be present in a configuration that meets the limitations of instant claims 7, 8, 15 and 16. Bretz discloses that such materials have superior fatigue crack growth resistance.

Bretz does not discuss improvements in strength or toughness of the prior art material, does not specify that the coarser grained portions are characterized by comparatively high operational stress, does not state that the finer grained portions are formed by partial-penetration or full-penetration mixing, and does not specify a structural assembly comprising the above material secured to other members. These differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention because:

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a) The strength or toughness of a given material would be inherent properties related to the composition and structure of that material, and whatever the values for such properties would be in the Bretz material, those values are held to fall within the limitations of the instant claims.

b) It is not possible to determine, in either the prior art or the present invention, what stress levels their respective materials may be subjected to at some indefinite point in the future; thus whatever stress the Bretz materials may experience is held to be equivalent to the "comparatively high" level as defined in the instant claims.

c) With regard to the newly claimed limitations on how the finer grained regions are formed, it is noted that the claims as amended are product-by-process claims. With regard to the claimed process limitations, it is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls to applicant to show that any process steps associated therewith result in a product materially different from that disclosed in the prior art. See *In re Brown* (173 USPQ 685) and *In re Fessman* (180 USPQ 524). In the present case, Applicant has not met this burden. Further, Bretz column 5, line 12 suggests that the prior art structure can be formed by "controlled working of an ingot", and the examiner's position is that such a step would involve at least the partial-penetration mixing recited in the instant claims.

d) With regard to claim 9, the examiner's position is that any practical application of the prior art materials, i.e. the making of useful products from those materials, would involve securing the prior art materials to other structural members.

Consequently, a prima facie case of obviousness is established between the disclosure of Bretz et al. and the presently claimed invention.

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4. In a response filed November 24, 2004 (particularly page 11 therein), Applicant alleges that the claimed invention can be distinguished from Bretz by the newly claimed "partial-penetration and full-penetration mixing" limitations. Applicant's arguments have been carefully considered, but are not persuasive of patentability for reasons as discussed in item 3(c) supra.

The examiner agrees that the previously applied Abrams, Cho, and Matlock patents do not disclose or suggest structures as defined in the claims as currently amended.

5. Claims 32-44 are allowable over the prior art of record. Claims 2, 4-6, 10, 12-14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective October 1, 2003, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700

GPW

February 4, 2005